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ABSTRACT

The author reviews research on the use of standardized tests to identify bilingual handicapped children. Issues supporting and criticizing standardized measurement are considered, and the author concludes that no test approaching a reasonable level of fairness across cultural groups exists. Research on the psycholinguistic aspects of identification is analyzed, and the author states that mildly to moderately handicapped bilingual students should be evaluated on the basis of language development and on bilingual functioning or language dominance. The importance of a multidisciplinary approach to evaluation is stressed, and legal considerations are addressed. (CL)

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THE IDENTIFICATION OF BILINGUAL HANDICAPPED STUDENTS

by

David H. Herman

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INTRODUCTION

The present paper is an attempt to discuss in a brief format some considerations of two areas of controversy in education: education for the exceptional child, and education for the bilingual child. In treating with the educational needs of a student who is both handicapped and bilingual, the educator experiences the subtle and complex demands of differentiating the presence of a handicapping condition from those of linguistic and cultural variability. The following overview presents various aspects of the issues:

1. standardized testing--pro and con
2. psycholinguistic considerations
3. legal considerations
4. conclusions and suggestions

It is hoped that the present discussion will provoke thoughtful reflection, and provide the basis for future forums wherein the needs of bilingual handicapped students may be met with increased professional sophistication and support.

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STANDARDIZED TESTING

In Support of Standardized Measurement

One school of thought puports that standardized test instruments are valid due to their having been substantiated with a population for which the performance was evaluated, and subsequently normed for comparison of the performances of other populations. Likewise, the consistency of the factor structure is considered as proving the reliability of standardized testing instruments. An evaluation of the Wechsler Intelligence Scale for Children, Revised (WISC-R), the most frequently used test of intelligence in the U.S., was seen as having remarkably consistent factor structure across the age range (Kaufman: 1975). With another well-entrenched instrument, the Binet, which has undergone multiple translations, one study cited the possibility of its being replaced by the McCarthy's Scales of Children's Abilities, the latter having a structure which may be more desireable for the purpose of administration of the instrument. However, in a comparison of the results achieved, parallel results in test scores were demonstrated (Davis and Rowland: 1974).

Further studies have been undertaken to demonstrate the validity and reliability of standardized measurement using populations of varying ethnic and socioeconomic

backgrounds. In one instance, the longitudinal course of measured intelligence in white middle-class and Puerto Rican working class subjects examined at the ages of 3 and 6 years, the findings suggested that stability in IQ over tne period was characteristic of the two groups, with greater stability in the Puerto Rican group. No evidence for deterioration in the IQ of the disadvantaged group was found. These data were considered with regard to the stability of IQ and the assessment of the effects of compensatory education (Hertzig and Birch: 1971). In another study, the correlation among the WISC subtests were factored for Anglo, Black and Chicano children, and the verbal comprehension and perceptual organization found for each group. The results suggest that the WISC measures the same abilities for children from the three ethnic groups studied (Silverstein: 1973).

Another aspect of the use of standardized testing is the consideration of the effects of testing in a language which may be a child's second language, testing in the second language with the use of a translator, and testing in the child's native language. When the WISC was given to Mexican-American first graders to determine whether the use of a bilingual interpreter would influence the Verbal, Performance, or Full Scale IQ scores, the

results indicated no significant differences between results obtained with that group and with the group given the test in English only (Swanson and de Blassie: 1971). When the effects of bilingualism were considered in the administration of other instruments, the Peabody Picture Vocabulary Test, the Bender Visual Motor Gestalt Test, and the Goodenough Draw-A-Man test, the results indicated that the administration of the instruments in English did not penalize bilingual students. Rather, it was felt that the subjects were proficient in neither language, and had not greater proficiency in one rather than tne other. Language did not appear to be a significant factor in the administration of the test battery (Eklund and Scott: 1965). In another study, 84 subjects, both bilingual and monolingual, were matched on the WISC, the Illinois Test of Psycholinguistic Ability, and the Bender Visual-Motor Gestalt Test. The results suggested that Spanish-American children are deficient on the input side of communicative skills, especially in understanding sentences and pictures. It was held that bilingualism per se did not appear to be as important a factor as commonly assumed (Killian; 1971).

Another issue commonly addressed in conjunction with the identification of handicapped bilingual students is that of cultural variance and/or deprivation.

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In treating cultural variables, one study found that the factors defined in the Goodenough Draw-A-Man Test and Raven Colored Progressive Matricies were functions of similarities in environmental stimulation, such as skin-color, socioeconomic status, modern dress, and other concommitants of civilization when comparing nonverbal intelligence in other atypical cultures (Khatena and Gowan: 1967). The results may be interpreted as meaning that the instruments are valid despite intervening cultural variables.

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Criticisms of Standardized Testing

In criticizing the use of standardized testing in the identification of bilingual handicapped students, it is fascinating to note that studies cited above in support of standardized testing tend to overlook the caveats indicated by Wechsler. The sample which he used for the norming of the WPPSI consisted of 98 children from one school district in California, and he suggests that the instrument is based upon limited data for the purposes of generalization, also noting the advisability of further study with other types of subjects. Thus, in a study of the measurement of preschool intellectual ability of disadvantaged preschool children by means of the WPPSI and Binet, the correlation coefficients ranged from .44 to .76 (Anthony: 1973). The results may be interpreted as indicating the need for careful study of the effects of socioeconomic variability on the application of standardized instruments. Another study found that the most widely-used test procedures are penalizing for nonanglos and lower socioeconomic groups, in considering the deficiencies in intelligence testing, cultural bias, construct validity, and diagnostic utility (Meeker and Meeker: 1973). In discussing the inappropriateness of intelligence testing, one study found that the Stanford-Binet was valid for

upper- but not lower- class bilingual Mexican-Americans due to limited language facility of the latter group. Only on three tests were the results the same across cultural groups: Paper-cutting year levels IX and XI and Memory for Designs at year level IX. The factor of translating a test or test directions was considered, and the author expressed the need for construction of tests in the native language with native cultural norms, administered by native psychologists (Sattler: 1974). When cultural components were analyzed for 14 revisions of the Binet for 9 countries from 1908-1960 by altering wording and content, one study found that: (a) the scores were lower for groups with characteristics differing from those of the original normative sample; (b) some Binet items were more responsive to cultural influences than others, and (c) test scores were lower for various ethnic groups--items with greater cultural loading were those dependent on schooling and other learned factors (Smith: 1974).

There is evidence to support the concept of varying levels of validity for standard intelligence tests, in that the test performance of bilingual compared with that of monolingual students compare unfavorably for the former group. When verbal tests are eliminated, the inferiority of bilinguals is reduced, eliminated, or even reversed (Anastasi and de Jesus: 1953).

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A further study substantiated the assumption that the utilization of performance measures of intelligence would be more appropriate than verbal measures of intelligence with bilingual children. The population studied was a sample of young bilingual Mexican-American children. It was also found that the difference between Verbal and Performance indicators of intellectual functioning tended to decline with age when groups of monolingual and bilingual children were compared (Vasa: 1971).

When evaluating the roles of language and culture in performance on individual intelligence tests of Mexican-Americans with Spanish language background compared to that of Anglo-Americans with English language background on the WISC and Peabody Picture Vocabulary Test, as well as the Columbia Mental Maturity Scale, test results revealed that the Mexican-Americans were lower on those subtests dependent upon language and specific cultural experiences (Corwin: 1965). Another study showed that there was a relationship of social class to performance on the WISC administered in Spanish and English, in that the subtests of the WISC differed for English and Spanish significantly for socioeconomic level and subtest scaled score (Palmer and Gafney: 1972).

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To substantiate further the position that language and culture are significant variables to be considered in conjunction with standardized testing, one author opined that: (a) Mexican-Americans will not perform better on Anglo-American material translated, but will do so with material varied linguistically and culturally; (b) Mexican-Americans do not perform well on material based on Anglo-American content and background; (c) Spanish translations of the IQ tests such as the Puerto Rican WISC are invalid for Mexican Americans due to differences in linguistic and cultural backgrounds, and (d) current educational programs are hindering the academic progress of Mexican-Americans (Cañedo: 1972). Elsewhere, it was stated that since most definitions of mental retardation are made on IQ score alone, an adaptive behavior scale is needed to be used in conjunction with IQ tests, as many children quite competent in social roles might not score well on IQ tests. Further, the necessity of arriving at a method for the correction of cultural biases on IQ tests was cited as a need of persons not from the dominant Anglo culture (Soeffing: 1975).

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PSYCHOLINGUISTIC ASPECTS OF BILINGUALISM

The contribution of psycholinguistics to the understanding of bilingualism is that it provides data on language acquisition, both of a native and of a second language. In the differential diagnosis of a handicapping condition as opposed to limited second-language functioning, the developmental data provided by psycholinguistic studies of bilingualism aid in the determination of the educational needs of a particular student.

In one study, subjects interchanged names of objects bilingually, and interpreted them on the basis of shared meaning or acoustic properties. Bilingual subjects excelled in tasks over age ranges evaluated. However, the implications for cognitive functioning are premature based on test results of the instrument by Piaget and Inhelder for intended and actual classification of objects (Ianco-Worrall: 1972). In attempting to determine whether syntactic errors made by children while learning a second language are due to native language interference or to developmental cognitive strategies as found in first language acquisition, a study showed that: (first language interference accounts for 4.7% of the errors; developmental strategies account for 87.1% of the errors. It was concluded that less explicit teaching of syntax in classes

for the teaching of English to speakers of other languages may produce better learning (Dulay and Burt: 1974). An interpretation of the above-mentioned studies is that second-language acquisition may produce a heightened awareness of a child's perception of phonology. However, the acquisition of the syntax of a second language is achieved without such a parallel heightened awareness of the mastery process. Therefore, in the process of identifying bilingual handicapped students, it is more appropriate to ask questions concerning the sounds of a language, rather than the grammar of the language.

Important criteria to consider are both the age at which introduction to a second language produces optimal results, and the purpose for which a second language is being studied. These factors may have considerable bearing on the student's performance in the learning of and learning in a second language. Some data support the contention that the development of the comprehension of syntax and of morphological features is chronological in nature. One study demonstrated that children of older ages learn much faster than younger children for the sample in the range of 4 to 9 years (Ervin-Tripp: 1974). A further study described three possible answers for the optimal age of instruction in a second language: (a) instruction before

or at the time of need for the language; no discernible difference was found in child versus adult language learning skills; (b) where pronunciation is important, instruction must begin as early as possible, such as in Kindergarten or nursery school; (c) school expediency--appropriate regular exposure, such as on a daily basis for a period of 4-6 years to achieve the goals of social communication and job-associated competencies (Bordie: 1971). Lastly, a study showed that the assumption that second language pronunciation is superior when acquired by children can also be attributed to environmental and socioeconomic factors, rather than the age of acquisition (Olson and Samuels: 1972).

In the application of psycholinguistic considerations to the identification of handicapping conditions in bilingual students, some research consulted produced an overview of test instruments thought to be useful in the process. The MIRA, or Mexican-American Iventory of Receptive Abilities, when used to identify handicapping conditions, may support the inference that, if a child performs poorly in both English and Spanish, a language delay may be suspected (Nelson-Burgess and Meyerson: 1975). It must be noted, however, that this instrument is not an index of expressive language, nor

can it appropriately be used with Hispanic-Americans who are from an ethnic background which is other than Mexican-Americans. Further, the authors made no note of the criteria by which they attempted to accomodate for cultural differences in the design of the test.

Others have cited the appropriateness of the language experience approach when applied to the identification of handicapping conditions in bilingual students. Since the emphasis in the approach is upon the involvement of the reader, rather than on tne orderly progression of skills, the real expression of the childs' experiences, put forth in his own words, constitute the core of the language experience approach (Hutchenson: 1972). In terms of its utility for the teaching of beginning reading, it is the relationsnip between the oral and written language which is the key to the learning of reading skills. In the language experience approach, meaning is the central focus (Hall: 1972). Thus, a diagnostic interpretation of a language experience story may result in both the accomodation for cultural differences in the child's language and experiences, as well as in the identification of problems which that child experiences in attempting basic reading skills mastery.

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In attempting an identification of language variables related to success in beginning reading, a study which represented thorough research on the language acquisition literature resulted in a list of seven indices of linguistic maturity which appear to be worthy of application to the language experience story administered as a part of a diagnostic battery (Dahl: 1975). The variables are:

1. inflectional morphology
2. length of a unit composed of a independent clause and structures used to modify the clause (T-unit)
3. ratio of dependent clause length to the length of the T-unit
4. ratio of sentence-combining transformations to T-units
5. total length of response (in words)
6. number of different words used
7. controled type/token ratio

The conversion of the above-mentioned variables into a useable set of guidelines for the diagnostician represent a task in need of completion. A further implication is that of the degree of linguistic sophistication necessary, which is usually relegated to the language specialist, rather than the diagnostician or the classroom practitioner.

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LEGAL CONSIDERATIONS

In recent years, a trend has emerged in which legislation is enforced through the courts; such is the case for bilingual students, as well as exceptional students. Indeed, bilingual handicapped students constitute a population subject to, in a figure of speech, legalistic cross-currents, in that their linguistic and cultural differences must be distinguished from the presence of handicapping conditions. The attention given to these professional responsibilities has arisen, in part, from the redress of wrongs mandated by court decisions. In one case, Diana versus the State Board of Education (ca. 1970); nine Spanish-American children claimed improper placement in classes for the mentally retarded on the basis of improper testing. The claim was that the WISC-R and the Binet given in English resulted in the case being settled in 1976 with the ruling that testing must be done both in English and Spanish, and that tests must be culturally fair. A further outcome was that the psychologists in California were ordered to develop new norms for test instruments based on populations of Spanish-speaking children (Newcomer: 1978).

Another issue is the implications for implementation of P.L. 94-142 for the education of all exceptionalities,

with its provision for maximum mainstreaming, with regards to the Equal Educational Opportunities Act of 1974. The latter act provides that:

> Section 1703 No state shall deny equal educational opportunity to any individual on account of his or her race, color, sex, or national origin by ... (f) failure of an educational agency to take appropriate action to overcome language barriers that impede equal participation of students in an educational program.

Questions arise as to the interpretation of the term "equal participation of students in an educational program" regarding the process of normalization required by P.L. 94-142. To resolve such an issue requires that the variables of linguistic and cultural difference be clearly defined and differentiated from exceptionalities.

In sum, an appraisal of the state of the art states that it should be apparent to the concerned evaluator that a testing device that even approaches a reasonable level of fairness across cultural groups does not yet exist. Thus, a recommended strategy is to make testing only one part of a more comprehensive process for collecting information about children (Identification of bias in testing: 1978). It appears that the multidisciplinary approach mandated by P.L. 94-142 provides a more adequate structure for the identification of linguistic, cultural, and handicapping variables than is mandated by the Equal Educational Opportunities Act of 1974.

DISCUSSION

In this writer's experience in the differential diagnosis of handicaps in bilingual students, conclusions may be reached about the relative degree of difficulty of ascertaining various handicaps, and regarding appropriate components of the diagnostic battery to be administered. As a general rule, it has been found that the degree of difficulty in differentiating bilingual functioning from handicapping conditions varies with the level of language usage of which the individual student is capable. For example, students whose intellectual functioning suggests moderate to severe impairment deviate grossly for age expectancies in language functioning; and thus, functioning bilingually is a peripheral consideration. Conversely, students who have demonstrated intellectual functioning suggestive of potential which is in the range of educable retardation, up through the normal to above-normal ranges, as in learning disabilities and emotional disturbances, may show surprisingly similar profiles in language functioning as demonstrated in school skill mastery tests. It is therefore a requisite that mildly to moderately handicapped bilingual students be evaluated on the basis of language development and on that of bilingual functioning, or language dominance.

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Included in the battery of tests administered to a bilingual student for diagnostic purposes, for the purposes of accomodating bilingual functioning, and cultural differences, an evaluator might include the following:

1. a sample of expressive and receptive language taken for the native and second languages
2. a linguistic analysis of the language development evidenced by the oral language sample
3. a series of language experience activities employed in both languages for the purposes of comparison with and contrast to other reading activities administered

Lastly, when defining the cultural variables, the diagnostician should help the parent to define and evaluate the child's functioning within the social and cultural context in which he lives. Such a technique implies supporting the parent's ability to describe baseline functioning, and helping the parent to clarify the functioning with regard to a culturally relevant evaluation. Some proponents of such an approach would insist upon a native evaluating the culture of another native. The present suggestion is, rather, that the diagnostician describe the data communicated by the parent, and aid the parent in its organization and interpretation.

In closing, what is recommended is the borrowing of techniques which have been tested and successfully applied in the social sciences. The disciplines from which the techniques may be adapted to the needs of the special educator include: linguistics, sociology, anthropology, and psychology. If the diagnostician is to function effectively in differentiating bilingual functioning, cultural differences, and handicapping conditions, then his sophistication in a truly multidisciplinary approach to educational evaluation is requisite. In the training of sophisticated evaluators, an eye should be cast in the direction of multidisciplinary training in the institutions of higher learning.

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